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HAY AND FORAGE EQUIPMENT EMPHASIS

IMPLEMENT & TRACTOR

The Business Magazine of the Agricultural, Industrial & Outdoor Power Equipment Industry

VOLUME 106, No. 4 APRIL 1991

THE FORD NEW HOLLAND D1000 baler has become popular to more than commercial hay producers. The company reports that 70 percent of D1000 sales go to owners for use on their farms.

With Interest In Midsize Bales Growing

Several New Balers Vie For Market

By W. THOMAS

THERE'S RENEWED interest in an old standby in the hay business—the rectangular bale.

This time, it's a newer midsize bale that is drawing attention in the marketplace, with several lines competing for the business.

Rectangular bales have been popular for decades because of their ease of handling, storage and feeding. Lack of labor help on the farm has led producers to search for new ways to put up feed easily. While the large round baler offered some labor-saving advantages, there is growing interest in the midsize rectangular baler.

Hesston introduced the first giant rectangular baler in the late 1970s. The company developed a machine that packed as much as 1 ton into the bale chamber, tied it and kicked it out onto the field. The new bale size was 4 x 4 feet and up to 8 feet long.

The stackability of this bale made it popular with commercial hay producers and larger livestock operations in the Midwest and West. In the mid-1980s a smaller bale—3 x 3-feet on the end and weighing about half a ton—came on the scene.

The latest wrinkle in this product class is the midsize rectangular bale that weighs from 800 to 1,000 pounds. You'll find Hesston with its 4700 and 4750 models, Vicon with the MP800, Ford New Holland with the D1000 and now Case IH with the 8570.

(See MIDSIZE, pg. 2)

Case-IH's Ashford Resigns Cites Personal Reasons

By BOB FRAZER

EXPRESSIONS of surprise and disappointment are the usual reaction to news that James K. Ashford has resigned the president and chief executive officer post with Tenneco's JI Case farm equipment unit.

The widely known and respected 54-year-old Ashford is credited with returning the Case division to profitability during his 3-year tenure. His success with

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EDITOR'S NOTEBOOK

Competition Isn't Always Healthy

By SCOTT NESBITT

WHILE I'D stop short of proposing a farm machinery cartel to set prices, I suspect a lot of people in the industry are getting tired of seeing the big players kick each other so hard that the profits are being knocked out of everyone's pockets.

Item 1: From the annual report of Varity Corp., the owners of Massey-Ferguson, comes the news that sales of equipment grew 4 percent in absolute dollar terms in fiscal 1990, but "Intense competition marked by discount pricing eroded margins, contributing to a decline of 24 percent in operating income."

Item 2: Deere & Co. issued a disappointing annual report that said "Sales incentive costs were substantially higher due to extremely competitive market conditions." That was followed by a first-quarter report that says "First quarter results were also adversely affected by significantly higher sales incentive costs."

Item 3: FEMA, the Farm Equipment Manufacturers Association, surveyed about 1,400 dealers and reported, among other findings, these results: "69 percent of respondents agreed that shortlines provide them with superior margins." Some 68 percent of those surveyed agreed with the statement that "Shortline companies are an important source of competition in the market. Without their competition, the few majors would be able to charge significantly more for equipment."

The list of items could go on for several pages, because farm machinery is, after all, a business, and that implies competition.

What's puzzling is that competition in the farm machinery business seems to lead to lost profits, rather than the stimulation of better ways to do things.

Is there so little difference among competing products that when times get tough, every manufacturer has to use give-aways to move inventory?

In the automotive world, some lines like BMW, Mercedes, Lexus and Infiniti command a premium price because buyers are willing to pay the extra money to own them. It can be argued that many of those auto purchases are made for emotional rather than practical reasons, and that farmers are not subject to those same whims.

Yet every dealer knows farmers who are highly brand-loyal, who will never switch brands. Look at the fuss that arose when Allis-Chalmers went from orange to green under new ownership, and the gladness that has greeted the return to an orange motif under the latest ownership. Do you remember the huge sigh of relief that arose when Case, having purchased International Harvester, revealed that it would keep the deep red color?

Those concerns over machinery color reflect the very human nature of farm machinery buyers. Chances are they would continue buying at fair prices, without the need to give all the profit away when the economy gets a little rough.

It may not be possible to make a direct analogy between the farm machinery business and the auto business, which bases so much of its marketing on emotion and non-tangible motives. But in both industries, the buyers are flesh-and-blood people, and car dealers eagerly seek those high-dollar franchises, because they know they'll have a good chance to make big bucks with those cars. Can the same be said for any major or shortline franchise in the farm machinery business?

The issue for dealers should, ultimately, be whether they can turn a profit, or at least enough profit to let them feel good about themselves. One of the big traps in the industry's loss-through-incentive tradition is that the dealers and their salesmen are often lured into believing they benefit from the programs.

Typically, sales incentive programs will incorporate some kind of "spiff," so the dealer principal and his sales personnel are rewarded for moving inventory. The spiff may be a trip to Hawaii or a cash incentive, a new car or whatever the marketing types feel is a good motivater.

The reward may stimulate the dealer over the short term, but what does it do over the long haul?

Might giveaways serve, in the long term, to teach customers that if they will only wait for the next downturn, they can get new machinery practically for free? Once they learn such behavior, it becomes especially tough to reeducate them to the notion that they need to pay a fair price in exchange for fair value. They must learn to buy machines on merits and when they need them, not only when they are on sale.

The line of thinking above was stimulated during breakfast and trying to catch up on some newspapers, while eavesdropping on a gaggle of farmers in the next booth.

The papers were a bit dull, though I wanted to keep tabs on some formerly Communist countries that are trying to develop market economies based on competition. The farmers, I realized, would have set a terrible example for those East Europeans, because the farmers were doing what they always do—helping their neighbors.

The impromptu breakfast roundtable happened to be held during the preplanting season, so everyone was sharing tips about the results of various varieties, chemicals and planting dates.

I can think of no business other than farming in which a person who scores a success is so eager to run out and reveal his secret to his closest competitor. A man (or woman) who gets an extra 2 bushels of corn off an acre will not only tell his neighbor how he did it, he will go over and spend his own time and resources helping his neighbor duplicate the feat.

You wouldn't see such behavior in the business of making lightbulbs or plywood. The government would probably step in and send everyone to jail if they did such things in the paving business. But in farming, and farm machinery, competition is not defined the same as in the rest of the world.

I am not complaining, because this magazine is 105 years old and has interviewed countless numbers of dealers who gladly spend the time sharing their secrets of success with other dealers who read the magazine—including their competitors right down the road.

A friend who's life is farming once explained that while my observation about farmers and competition was correct, I had missed the point.

"Farmers may be lousy businessmen," he said, "but they're mighty good people."

His explanation may well hold for the major and minor players in the world of farm machinery manufacturing. They may not know how to deal with competition, but they sure know how to treat their customers right. □

INDUSTRY UPDATE

Sales: A Casualty of War?

BECAUSE it was mercifully short, the Gulf conflict may have no long-term effect on the farm machinery market. But while it lasted, it apparently clobbered sales, with the exception of combines, which rose nicely in January and modestly in February compared to 1990 results, according to flash reports from the Equipment Manufacturers Institute.

U.S. - UNIT RETAIL SALES

	January & Year-To-Date			December 1990 Inventory
Equipment	1991	1990	% Change	N.A.Factory & U.S. Field
Farm Wheel Tractors:				
2-Wheel Drive				
Under 40 HP	1,679	2,276	(26.2)	40,795
40 & Under 100 HP	1,911	2,429	(21.3)	25,392
100 HP & Over	1,207	1,720	(29.8)	14,042
Total 2-Wheel Drive	4,797	6,425	(25.3)	80,229
Total 4-Wheel Drive	171	320	(46.6)	2,445
Total Farm Wheel Tractors	4,948	6,745	(26.3)	82,674
Combines (Self-Propelled)	645	504	28.0	5,189

U.S. - UNIT RETAIL SALES

	February			January-February			January 1991 Inventory
Equipment	1991	1990	% Change	1991	1990	% Change	N.A.Factory & U.S. Field
Farm Wheel Tractors:							
2-Wheel Drive							
Under 40 HP	1,528	2,176	(29.8)	3,233	4,452	(27.4)	41,063
40 & Under 100 HP	1,976	2,296	(13.9)	3,881	4,725	(17.9)	25,686
100 HP & Over	1,450	1,602	(9.5)	2,656	3,322	(20.0)	13,878
Total 2-Wheel Drive	4,954	6,074	(18.4)	9,770	12,499	(21.8)	80,627
Total 4-Wheel Drive	193	327	(41.0)	364	647	(43.7)	2,457
Total Farm Wheel Tractors	5,147	6,401	(19.6)	10,134	13,146	(22.9)	83,084
Combines (Self-Propelled)	425	480	(11.5)	1,069	984	8.6	5,427

WHO'S WHO

Kohler Co., Kohler, Wis., has named **Robert Leffel** as director of marketing, sales and service, and **Charles Vrba** as director of reliability and program management in the engine division.

Leffel had been director of sales and service, and will now oversee all marketing, product management, promotions and advertising. Vrba will be responsible for the quality of engines and timely product introductions.

****

Homelite Division of Textron, Inc., has a new president, **Robert W. Reid**, the former president of the Jacobsen division of Textron. He succeeds Robert D. Batting, who had been acting Homelite president since November, 1990. Batting, president of Homelite from 1985 to early 1989, is a group vice president of Textron. The personnel actions were announced by Beverly F. Dolan, president and CEO of Textron.

****

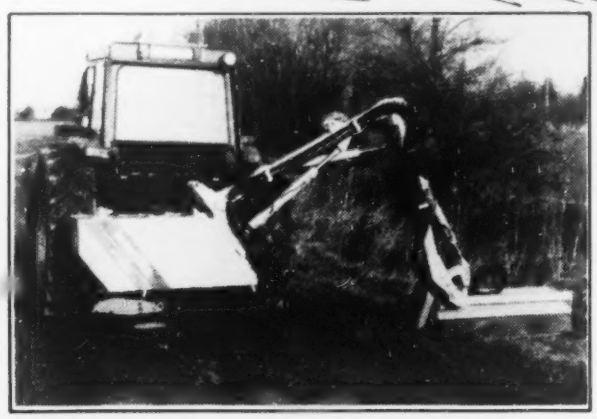
Interstate Battery System of America, Inc., Dallas, Texas, has promoted **Thomas "Tommy" Miller** to president and chief executive officer. He had been vice president since 1978, and is a 28-year veteran of the battery business.

Break Out with Bomfords

The long arm of the B48X means that no area can escape attention.

Simple and efficient design and controls help keep maintenance and running costs to a minimum and the exceptional range of cutting positions makes short work of awkward ditches and shoulders.

Call your nearest Bomford Center and we will send full details down the line.



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Fax No. 404 934 5390

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PO Box 408
Swansea
Ma 02777 USA
Tel. No. 508 379 3673
Fax. No. 508 379 3610

Circle (7) on Reply Card

INDUSTRY NEWS

Varity Corp Has Net Income Rise

Varity Corp., parent of Massey-Ferguson, reported its net income increased 10 percent, to $101.5 million (U.S.), in the corporation's latest fiscal year, which ended Jan. 31, 1991.

The company said the results, second highest in the firm's 144 years, came after absorbing a nonrecurring pre-tax charge in the third quarter of $15.5 million, and a fourth-quarter provision of $18 million. Fully diluted earnings per share of 30 cents were equal to last year's result.

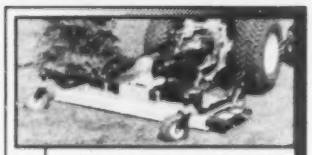
Varity said it saw a strong performance from it's newly acquired Kelsey-Hayes automotive components group, and improved earnings from Perkins diesel engines.

These balanced weakened results in Massey-Ferguson farm machinery, which experienced a half-point growth in market share and 4 percent sales growth, to $1.3 billion. However, the gain melted away because changing currency values equated to a drop of nearly 7 percent overall. Intense competition marked by discount pricing was blamed for eroding margins, contributing to a 24 percent decline in operating income, to $70 million. □

DOUGLAS Rotary Tillers

Manufactured right here in North America, **DOUGLAS** Rotary Tillers feature automatic chain tighteners, splined shafts and an advanced 3 pt hitch assembly for easier hook up and more versatility in adjusting working depth to match soil conditions and tillage job required. "Side Shift" is also standard on most models.

DOUGLAS MANUFACTURING
Winkler, MB. R6W 4C2
PH: (204) 325-4561



DOUGLAS Finishing Mowers

If you've got more yard than time but still want a manicured lawn **DOUGLAS** Finishing Mowers are for you. With 3 blades, 4 wheels plus front roller and a new 1 piece 3/16" plate steel deck you'll have that professionally cut look you're after in no time flat. And with new heavier gear boxes, larger pulleys and a new spindle with heavier bearings your **DOUGLAS** Finishing Mower is built to keep on cutting, even when used for rough cutting around outbuildings.

DOUGLAS MANUFACTURING
Winkler, MB. R6W 4C2
PH: (204) 325-4561

Gehl Co. Posts Record Results

Gehl Co. said net income was $7.3 million for 1990, a gain of 45 percent from the $5 million posted in 1989. Sales were $175 million, up 13 percent from 1989. Earnings per share for 1990 were $1.21.

The company said agricultural division sales were up 16 percent, to $132.6 million, while the industrial/construction was up 4 percent, to $42.3 million.

Gehl also announced in late February a quarterly dividend of 4 cents per common share. □

New Finance Arm For Deutz-Allis

Deutz-Allis Corp. has established a new captive subsidiary as a dedicated finance source for the company's retail dealers.

The new AGCO Farm Finance Corp., began processing business in January. It takes its name from the farm machinery line's new holding company, Allis-Gleaner Corp., also known as AGCO.

Bernard Doepker, president of the new company, said it will offer 24-hour response to credit application and programs that are competitively priced. □

Chase Takes Over Allied Financing

Allied Products Corp., parent of White-New Idea and other lines of farm machinery, has announced sale of a "substantial portion" of its Allied Products Financial Services Corp. to Chase Manhattan Leasing Co. (Michigan).

Chase Leasing President John Unchester said Chase would provide retail financing services to support sale of Allied agricultural equipment through White and New Idea dealers. He noted that Chase already serves nearly 100 of the dealers.

The price for Allied's consolidated finance subsidiary was put in excess of $17 million. Chase, headquartered in Paramus, N.J., said the portfolio included more than 2,400 contracts for Allied agricultural equipment.

Allied president and CEO Richard A. Drexler said the sale "will assure the existing financial relationship with our network of agricultural equipment dealers will continue in a professional and capable manner." Sale proceeds, he said, would be used to pay down virtually all debt of the subsidiary. □

Steiger Tractor Creator Dies

Maurice Steiger, 62, who helped found the Steiger Tractor Co., died March 17 in the crash of a twin-engine plane in dense fog near Thief River Falls, Minn. Also killed were his sons, Bruce, 41, Brad, 33, and a friend, Dennis Hallstron, 52.

Contraction Seen In Canadian Market

FARM machinery sales remained weak in Canada, with figures from the Canadian Farm and Industrial Equipment Institute showing full-year 1990 sales down 7.6 percent from 1989 figures. The report for January, the first full month available at deadline, showed 1991 getting off to a miserable start.

Canada Report
Retail Sales in Units

	December			December/YTD		
EQUIPMENT	1990	1989	% Chg.	1990	1989	% Chg.
FARM WHEEL TRACTORS						
2WD under 40 H.P.	215	243	-11.5%	3,574	3,950	-9.5%
2WD 40-99 H.P.	852	894	-4.7%	7,228	7,865	-8.1%
2WD 100 H.P. & Over	326	331	-1.5%	2,602	2,957	-12.0%
Total 2WD	1,393	1,468	-5.1%	13,404	14,772	-9.3%
Total 4WD	97	120	-19.2%	1,585	1,456	8.9%
TOTAL FARM WHEEL TRACTORS:	1,490	1,588	-6.2%	14,989	16,228	-7.6%
COMBINES						
Self Propelled	84	124	-32.3%	1,404	1,637	-14.2%
Pull Type	10	14	-28.6%	184	631	-70.8%

Canada Report
Retail Sales in Units

	January			January/YTD		
EQUIPMENT	1991	1990	% Chg.	1991	1990	% Chg.
FARM WHEEL TRACTORS						
2WD under 40 H.P.	158	199	-20.6%	158	199	-20.6%
2WD 40-99 H.P.	367	530	-30.8%	367	530	-30.8%
2WD 100 H.P. & Over	125	184	-32.1%	125	184	-32.1%
Total 2WD	650	913	-28.8%	650	913	-28.8%
Total 4WD	70	147	-52.6%	70	147	52.6%
TOTAL FARM WHEEL TRACTORS:	720	1,060	-32.1%	720	1,060	-32.1%
COMBINES						
Self Propelled	42	58	-27.6%	142	58	-27.6%
Pull Type	1	10	-90.0%	1	10	-90.0%

The Steiger line, now absorbed into Case-IH, began with homemade 4wd machines built in 1958 by Maurice Steiger and his brother Douglass. They began manufacturing in 1959, and sold control to investors in 1969. Their machines helped change farming forever.

Police said the airplane, piloted by Maurice, may have hit a telegraph line and spun out of control on its approach to the airport at Thief River, where all the victims lived. □

Associations Merge In Wisconsin, Illinois

Effective Sept. 1, a new Midwest Equipment Dealers Association will be created, merging the current Illinois Retail Farm Equipment Association and the Wisconsin Farm Equipment Association.

Many details remain to be worked out by joint committees. The 2 state associations held their fourth consecutive joint session last December, and approved the merger then.

Primary offices will be in Madison, Wis., with a major branch office in Springfield, Ill.; both are capital cities. IRFEA executive vice president Vic Zoschak will remain with the merged group until his retirement Sept. 1, 1992. □

'Rebuild Kuwait' Is Theme of Show

Proclaiming that "The Gulf Region is once again open for business," a consortium of U.S. and foreign firms and governments have organized a trade show called "Made In The U.S.A.—The Products and Services of America."

The show, for U.S. companies only, is to be held May 13 to 17 at the Dubai World Trade Center. Information is available from Glahe International Inc., 1700 K. Street N.W., Washington, D.C., 20006-3824. Phone 202-659-4557. □

MAKE AND MODEL OF TRACTOR	Test No.	Fuel Used	Weight With Ballast	Lbs. Ballast Carried	ENGINE No. of Cylinders	Bore and Stroke	Displacement Cu. in.	Rated RPM	Max. PTO HP at Rated Engine RPM	Std. PTO RPM	Max. PTO HP Std. PTO RPM	Max. Drawbar HP	MPH at Max. Dwbr. HP	Max. Lbs. Pull	FUEL CONSUMPTION (HP Hours Per Gallon) at:- Max. PTO HP at Std. PTO RPM	PTO Average at Varying Power	—Varing Drawbar Power— Max. Available Power	75% of Pull Max. Power	50% of Pull at Max. Power
Cougar III ST 280	1401	Die	33105	2625	6	5.50x6.00	855	2100	---	---	---	236.82	5.37	31517					
Cougar III ST 280	1412	Die	33345	2705	6	5.40x6.50	893	2100	---	---	---	246.13	6.28	32099	---	---	14.85	13.76	11.69
Panther IV KM 325	1543	Die	33715	3955	6	5.50x6.00	855	2100	---	---	---	255.67	6.78	32565	---	---	16.04	14.79	13.00
Panther IV CM 360	1544	Die	33740	3815	6	5.40x6.50	893	2100	---	---	---	[illegible].84	6.73	32328	---	---	15.96	15.15	13.29
Panther IV SM 325	1550	Die	33930	5030	6	4.921x5.906	674	2100	---	---	---	278.09	6.78	33651	---	---	17.12	15.98	14.22
Panther CP 1325 12 Speed	1453	Die	35870	410	6	5.40x6.50	893	2100	299.10	1002	299.10	266.97	6.95	33802	16.55	13.59	14.71	13.86	11.95
Panther CP 1360 12 Speed	1455	Die	39120	3860	6	5.40x6.50	893	2100	334.33	1002	334.33	294.07	6.89	36123	16.75	13.78	14.60	13.81	11.85
Panther CP 1400 12 Speed	1464	Die	43615	7165	6	5.40x6.50	893	2100	---	---	---	334.94	8.17	40272	---	---	14.92	14.12	12.07
Panther KP 1325 12 Speed	1465	Die	35815	605	6	5.50x6.00	855	2100	301.21	1002	301.21	267.87	6.93	34267	17.38	13.97	15.58	14.15	11.84
Panther KP 1360 12 Speed	1456	Die	39570	4090	6	5.50x6.00	855	2100	326.12	1002	326.12	291.14	6.92	36771	17.39	14.15	15.45	14.27	12.15
Panther KP 1400 12 Speed	1463	Die	43175	6640	6	5.50x6.00	855	2100	---	---	---	333.18	4.82	40803	---	---	15.87	14.54	12.10
(1) SN. 109-00328 and higher. (2) SN. 104-00331 and higher. (3) Equipped with hydrostatic PTO 105HP at 1000 RPM.																			
Valmet																			
980 4x4	1599	Die	13265	5000	4	4.01x4.72	239	2300	88.01	540	80.55	78.04	6.71	10722	18.23	13.14	14.35	13.19	11.26
148 4x4	1600	Die	16830	5920	6	4.01x4.72	359	2300	126.89	1000	127.11	110.09	4.94	13574	16.92	13.63	14.29	13.29	11.71
Versatile																			
256 Hydrostatic	1518	Die	10460	1310	4	4.02x4.72	239	2500	84.36	540	85.08	62.81	5.49	9134	16.45	12.67	11.82	11.07	9.52
276 Hydrostatic	1565	Die	10510	1310	4	4.02x4.72	239	2500	100.22	540	102.14	70.91	5.61	7892	16.50	12.86	11.37	10.25	8.63
835 Series 3 12 Speed SN. 835 83 036769 & higher	1482	Die	27980	3595	6	5.50x6.00	855	2100	200.30	1009	200.30	181.14	5.34	25687	15.82	11.86	14.45	12.74	10.45
836 Manual	1566	Die	25960	1300	6	4.921x5.354	611	2100	192.54	1008	192.54	170.56	4.83	24123	17.71	13.80	15.59	14.11	11.99
836 Powershift	1567	Die	25995	1535	6	4.921x5.354	611	2100	181.04	997	181.04	161.45	6.77	24723	16.65	12.56	14.80	13.34	11.24
856 Powershift	1568	Die	28000	2920	6	4.921x5.354	611	2100	209.28	997	209.28	184.04	5.88	26479	17.24	13.22	15.35	13.59	11.40
875 Series 3 12 Speed SN. 875 83 057906 & higher	1483	Die	29500	3870	6	5.50x6.00	855	2100	252.67	1008	252.67	227.48	5.65	26725	16.82	13.06	15.25	13.73	11.82
876 Manual	1569	Die	29500	4540	6	4.921x5.354	611	2100	---	---	---	233.92	6.53	27703	---	---	16.85	15.68	13.65
936 Manual	1570	Die	32385	5260	6	5.50x6.00	855	2100	---	---	---	260.45	6.78	29495	---	---	15.47	14.04	12.09
1150 8 Speed	1462	Die	46500	11360	6	6.25x6.25	1150	2100	---	---	---	400.29	5.92	43219	---	---	15.84	14.64	12.35
White																			
2-45 20 Speed	1395	Die	6630	660	4	3.858x3.62	169.3	2250	43.73	540	36.62	37.32	3.97	4455	12.70	11.25	10.96	11.00	9.66
2-55 16 Speed	1466	Die	7055	860	4	4.02x3.94	199.4	2200	53.32	540	45.74	48.49	4.88	5037	14.89	12.38	13.35	13.21	11.39
2-62 20 Speed	1396	Die	6875	635	4	4.016x4.33	219	2200	61.46	540	54.25	51.63	6.05	4695	16.31	13.85	13.76	13.49	12.08
2-65 16 Speed	1467	Die	7110	790	4	4.02x4.65	235	2200	62.50	540	55.40	56.67	6.51	4827	16.19	12.91	13.94	13.20	11.29
2-75 16 Speed	1486	Die	9625	1705	6	4.016x4.33	329	2200	75.39	1000	75.64	65.05	6.04	6487	15.86	12.02	13.01	12.21	10.48
2-88 18 Speed	1487	Die	13615	0	6	3.875x5.00	354	2200	86.78	1007	86.78	74.67	6.51	9486	15.71	12.69	13.62	12.74	10.79
60 18 Speed	1636	Die	8855	315	4	4.02x4.72	239	2200	61.07	540	61.61	52.39	3.88	7762	14.80	11.83	12.48	11.93	9.84
80 18 Speed	1637	Die	11340	1990	4	4.02x4.72	239	2200	81.48	994	81.48	71.01	3.83	10091	16.83	13.37	14.04	13.15	11.09
100	1614	Die	14485	545	6	4.02x4.72	359	2400	94.36	1000	93.48	82.57	5.97	13629	14.97	11.86	12.77	11.88	10.15
2-110 18 Speed	1468	Die	13955	0	6	3.875x5.00	354	2200	110.52	1007	110.52	94.90	6.40	9500	16.77	13.27	14.19	13.08	10.84
120	1615	Die	15315	850	6	4.02x4.72	359	2200	119.13	1000	121.94	104.69	6.62	14286	16.94	13.11	14.76	13.57	11.49
140	1616	Die	15665	1000	6	4.02x4.72	359	2200	138.53	1000	140.30	125.01	6.17	15060	17.49	14.29	15.39	14.58	12.62
160	1607	Die	18850	1560	6	4.49x5.32	504.5	2200	162.47	1000	165.97	142.74	6.24	18055	17.78	14.36	15.45	14.34	12.29
185	1608	Die	18770	1620	6	4.49x5.32	504.5	2200	187.55	1000	192.38	167.72	6.18	18318	17.35	14.19	15.21	14.34	12.40
4-225	1558	Die	24140	0	8	4.50x5.00	636	2600	195.65	1002	195.65	170.57	5.47	22865	15.60	12.06	13.64	12.42	10.44
4-270	1559	Die	30650	0	6	4.75x6.00	638	2100	239.25	1000	242.30	211.70	6.60	27180	16.69	13.60	14.53	13.53	11.90
Yanmar																			
YM226D	1442	Die	3380	1080	3	2.95x3.35	68.7	2600	19.42	540	17.87	16.14	4.78	2073	15.07	11.67	11.92	10.93	9.26
YM276D	1443	Die	4110	1405	3	3.31x3.35	86.2	2600	23.00	540	22.82	18.93	5.78	2412	14.35	11.06	11.08	10.57	8.90
YM336D	1444	Die	5020	1615	3	3.31x3.54	91.3	2600	26.98	540	25.63	23.00	6.28	3086	14.27	11.32	11.39	10.66	9.64
Zetor																			
5245/5211	1571	Die	7295	385	3	4.02x4.33	164.6	2200	42.51	540	40.10	38.44	5.79	5955	16.56	13.17	14.59	13.83	12.10
6245/6211	1601	Die	8535	885	4	3.94x4.33	211	2200	53.09	540	50.23	47.43	5.57	6332	16.06	13.04	13.84	13.34	11.50
7245/7211	1572	Die	8565	725	4	4.02x4.33	219	2200	58.28	540	54.91	52.52	5.95	6356	16.82	13.51	14.36	13.90	12.33
7745/7711	1602	Die	10360	2455	4	4.02x4.72	239	2200	65.74	540	62.17	57.56	6.63	7484	17.01	13.94	14.30	13.72	12.05